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10/090,404	03/04/2002	Henry Esmond Butterworth	ARC920010105US1	4855

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EXAMINER

CLOUD, JOIYA M

ART UNIT	PAPER NUMBER
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2444

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06/07/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/090,404	Applicant(s) BUTTERWORTH ET AL.	
	Examiner JOIYA CLOUD	Art Unit 2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/21/2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☒ Claim(s) 34-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to communications filed 03/21/2011. Claims 1-41 are PENDING.

Allowable Subject Matter

Claims 34-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

A) The allegation that ""each"" nodes determines an optimal nodal membership is incorrect." In the relied-upon portion of Elliot only the master node calculates the schedule and does so by communicating with the other nodes. "

As to the above point A), Examiner respectfully disagrees. Lacking any specific requirements as to *HOW* each of the plural nodes arrive at the same membership, the prior art of record clearly states in col. 9, lines 24-26, "it may be advantageous to have the nodes computer their *own* schedules, thus having no master node. Examiner advises Applicant to read the cited prior art in its entirety and further to amend the instant claim to further detail how optimum nodal membership is determined.

B) The finding fact that Elliot "teaches using the same seed for all nodes is clearly erroneous.

As to the above point B), Examiner respectfully disagrees. No where does Applicant define in the claim language what constitutes *the seed*, but merely requires a seed to be the same for each node in determining of an optimum nodal membership. Examiner submits that one or ordinary skill in the art would recognize the same initial string schedules upon creation, having the same length to be the same seed for which determinations can be arrived by (See col. 6, lines 55-col. 7, lines 40).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-33 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by **Elliot (US Patent No. 6,963,747 B1)**.

As per claim 1, Elliot teaches plural computer nodes (**Figure 4a**), each node: determining a system topography; determining an optimum nodal membership based on the topography (**col. 5, lines 64-col. 6, line 7, determination of a schedules based on topology and node traffic information across the network of routers and traffic sources and endpoints via the mapping information**), the determining of an optimum nodal membership at each of the plural nodes converging with the determining of an optimum nodal membership on each of the

other nodes of the plural nodes in the computer system with each of the plural nodes arriving at the same optimum nodal membership without having to transmit optimization solutions to the other nodes being used by all nodes in the system (**col. 9, lines 25-41, where nodes compute their own schedules independently, where the nodes may independently harmonize their schedules**).

As per claim 2, Elliot teaches comprising more than two nodes, the determining of an optimum nodal membership being based on a seed, the seed being the same for each node such that each node uses the same seed as every other node in determining the optimum membership, such that the optimum membership arrived at by each node is the same membership arrived at by every other node (**Referring again to FIG. 3, initial schedules for the nodes are created at 202. The initial-schedule for a node consists of a string of 1's (denoting when the node may transmit) followed by a string of 0's (denoting when the node must be silent). The string lengths for the schedules of the network nodes may generally be the same and the strings may be long. As an example, the nodes in the network may have a schedule of, say, 10,000 bits long.**).

As per claim 3, Elliot teaches wherein determining an optimum membership is undertaken using a randomized simulated annealing technique (**col. 1, lines 65-col. 2, lines 8 and col. 9, lines 10-20**).

As per claim 4, Elliot teaches wherein each node includes a link state module undertaking the determining a topology and an optimization module undertaking the determining

an optimum membership, the link state module sending the topology to the optimization module **(col. 5, lines 64-col. 6, lines 2).**

As per claim 5, Elliot teaches wherein the link state module at each node communicates with at least one link state module at another node in the system **(col. 5, line 64-col. 6, lines 8).**

As per claim 6, Elliot teaches wherein the link state module communicates with a database of links and nodes **(col. 5, line 64-col. 6, lines 8).**

As per claim 7, Elliot teaches wherein elements in the database are periodically refreshed **(col. 3, lines 60-col. 4, lines 10, updating on schedule information).**

As per claim 8, Elliot teaches wherein each node includes an event manager receiving the optimum membership from the optimization module, the optimum membership being used by the event manager during system operations **(col. and col. 5, lines 55-65).**

As per claim 9, Elliot teaches wherein the method acts undertaken by the optimization module further include: iteratively determining plural solutions **(see claim 5 and col. 5, lines 1-5, iteratively harmonizing the created schedules until the predetermined level of transmit collisions is obtained)**; determining which solution is a most desirable solution **(col. 5, lines 1-5)**; returning the most desirable solution responsive to a determination that it is fully connected **(col. 4, lines 29-39)**; otherwise returning a next most desirable solution responsive to a determination that the next most desirable solution is fully connected **(col. 5, lines 1-5).**

As per claim 10-17, claims 10-17 recites substantially the same limitations as claims 1 and 3-9, but in device rather than system form. Therefore, the rejection for claims 1 and 3-9 applies equally as well to claim 10-17.

As per claims 18-24, claims 18-24 recites similar limitations as claims 1-5 and 8-9. Therefore, the rejection for claims 1-5 and 8-9 applies equally as well to claims 18-24.

As per claims 25-32, claims 25-32 recites similar limitations as claims 1-5, and 8-9. Therefore, the rejection for claims 1-5 and 8-9. applies equally as well to claims 25-32.

As per claim 33, Elliot teaches a method for providing plural nodes in a system of nodes with a membership that is identical for each node, comprising: providing topology information (col. 5, lines 64-col. 6, line 7, **determination of a schedules based on topology and node traffic information across the network of routers and traffic sources and endpoints via the mapping information**); providing a respective version of a node membership optimization module to each of plural views, wherein each version of the node membership optimization module determines a node membership and wherein for each view, a view containing a respective local node is selected, the nodes subsequently using the node membership (**col. 7, lines 50-63**).

CONCLUSION

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joiya Cloud whose telephone number is 571-270-1146. The examiner can normally be reached Monday to Friday from on 7:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3922. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

Application/Control Number: 10/090,404

Page 8

Art Unit: 2444

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC

Art Unit 2444

June 4, 2011

/Peling A Shaw/

Primary Examiner, Art Unit 2444